

Cloud-based tools are giving K-12 collaboration efforts a boost

ACROSS THE US, INNOVATIVE COLLABORATION PRACTICES are happening in the cloud: Sixth-graders participate in literary salons. Fourth-graders mentor kindergarteners. And teachers use virtual Post-it notes to advise students as they create their own television shows.

In other words, cloud computing is no longer just used to manage administrative technology--thanks to its accessibility, ease of use, and versatility. All over the country, teachers, students, and administrators are trying different cloud-based solutions--some free or inexpensive--that allow multiple users to collaborate in innovative ways.

Here are nine examples from K-12 educators who have found creative ways to get their heads in the cloud.

Wixie Equals Buddies

The cloud is giving some fourth-grade "teachers" in Colorado the sense of accomplishment that comes with having their own students whom they can be proud of.

That's thanks to Melissa Swenson, a teacher and librarian at Meiklejohn Elementary School in Arvada, CO, who introduced Wixie, a cloudbased solution that allows students to create original art, voice recordings, and written communication in one place online. With the help of Wixie, the school is conducting a pilot program across all of the classrooms that turns some older students into mentors for younger ones.

Fourth-graders at the school recently paired up with their kindergarten "buddies" to work side-by-side on desktop computers in class. The older students designed math activities using the online application, and then worked one-on-one to teach the concepts to all of the younger pupils in the project.

"The kindergarteners were learning about shapes, so the fourth-graders used Wixie to design shape activities for them with directions like, 'Fill in the triangle shapes with red,' or 'Drag the shape word inside the shape,'" Swenson explains. One older student took the lesson plan to a new level by integrating a project on proper nouns into the mix. Working on his computer screen, the kindergartener had to drag the proper nouns into one box, and the regular nouns into another.

When Swenson wondered out loud if the lesson would be too difficult, the older student answered, "Oh, it's okay, my buddy is really smart!"

"When they can get online and work on their own, or in a group format by logging into a program like Wixie," Swenson says, "it opens up a whole new world for them, and for their teachers."

(Not So) Far Afield

Field trips have come a long way since the days when students were whisked away on a bus to explore new terrain, only to forget about the experience the next day. The School District of Palm Beach County (FL) is using cloud technology to ensure that the experience resonates with students, starting days or weeks before the field trip itself.

With the help of Adobe Connect Professional, the district's technology team has set up a way for students, teachers, and outside parties who might participate in a field trip--like forest rangers and university scientists--to collaborate online before, during, and after the trips.

In advance of a recent trip to a local state park to explore its different ecological zones, for example, Palm Beach students met online with park rangers via a video chat to ask questions, obtain beach reports, and gather other pertinent information. Once out in the field, students were armed with laptops, cameras, and scientific probe devices that allowed them to gather data for use in the classroom the next day. Final reports (both written and video) were completed online and shared with teachers back at the school. Teachers were able to connect with the students in real time with feedback to the information they were uploading, ask additional questions, and even grade the assignments students were completing back at the park.

"Using technology, teachers can make the lesson much more compelling and extend past a single day's trip," says Kim Cavanaugh, the district's technology program specialist. "They can also latch onto the enthusiasm immediately, and use it as a motivational tool for students."

Google Docs and Pop-ins

When Lloyd Mitchell's first assignment for his fifth-graders at the start of the school year was to set up a folder system in Google Docs for all the work they would complete, little did they know it would give him the ability to "pop in" almost any time they had a class assignment to prepare.

The Unquowa School in Fairfield, CT, began using Google Apps about two years ago, and today about 85 percent of the institution's teachers use the cloud-based solution for word processing, spreadsheets, and presentations. Using the application also holds students more accountable: Excuses like "the dog ate my homework" don't fly in the virtual world. "My students come to class prepared," says Mitchell. "That alone creates a more enriching and efficient classroom environment."

The homework that the dog didn't eat can be as simple as a few chapters to read or as complex as a classroom project that involves several students. Students are alerted when Mitchell makes changes or notes in the application, and can quickly address those comments. For an assigned reading project, as an example, students used Google Docs to take notes in an outline format. Once the assignments were finished and dropped into their respective online folders, Mitchell was able to correct them immediately.

If Mitchell happens to be online while students are working on their assignments, he can simply "pop in." Students can communicate with him or with other students via instant message. Mitchell can also give instant demonstrations, and the students can follow up immediately with questions.

"Being able to handle that quick back-and-forth online really helps students do better on their assignments," Mitchell says.

You Read It; No, You Read It!

Managing feedback from teachers on essays and other projects is one thing, but having peers comment on their work--and vice versa--can be downright daunting for many students. Ryan Gilbert, an English teacher at Ohio Hi-Point Career Center in Bellefontaine, OH, has found that cloud collaboration is one way to alleviate some of that pain.

Gilbert's cloud tool of choice is StudySync, which connects students to an extensive, online library of classics, modern texts, video-based lessons, and, most important, peer-to-peer communication tools. Gilbert, who teaches college prep and honors English, began using StudySync's peer review feature at the start of the current school year.

After completing their writing assignments, students log into StudySync and submit their work to Gilbert, and also for review by their classmates. At the same time, they are randomly assigned a certain number of their classmates' work to review.

"The random assignment helps to alleviate clique-forming," says Gilbert. Students use the system to complete objective reviews with a pre-determined rubric. When submitting their reviews, they can share their names, or not. "I can see who did what, but it's up to them to share with one another," says Gilbert, who sees the anonymity as a good way to elicit honest reviews.

The online system also helps alleviate some other issues students deal with when working on desktop- or laptop-based computer programs. System crashes, for example, are a thing of the past. "The cloud offers everybody the ubiquity of being able to access your material everywhere," says Gilbert.

Wiki Fever in Georgia

Vicki Davis says her "wiki fever" has spread throughout the Westwood Schools in Camilla, GA, where she is a computer science teacher--and way beyond.

Until just recently, wikis only allowed a handful of "editors" to work at one time, she says. "We're now at the point in education where we can have massive wikis with literally hundreds of students involved," adds Davis, "all editing and working together for a common cause."

Her technology-centric classroom revolves around the multiple wikis that she has set up over the last five years at the school where she teaches technology to students in grades 8 to 12. Wiki is the focal point for her computer science class, with a Google Calendar that's populated with lesson plans, assignments, and other pertinent information created for students.

Most recently, Davis got involved with a wiki whose reach extends well beyond Westwood Schools. Roughly 500 students worldwide are working together online to create and edit a wiki that examines current trends in college education. For example, in looking at digital textbooks on campus, students examine the characteristics of their various generations and make predictions about the use of e-books over the next five years.

"They are all working together to write an authentic, unique research report in the cloud," says Davis. "The end result will be a great wiki document on how their generation will actually use various technology tools in college."

The Virtual Post-it Note

Kieran Ryan is the type of teacher who once had a lot of sticky notes pasted to her desk, stuck to her computer monitor, and taped to her personal calendar. That's why the sixth-grade teacher at Loudonville Elementary School in Albany, NY, is particularly enthused by her latest online find: Lino, an online web sticky note service that can be used to post memos, to-do lists, ideas, and photos anywhere on an online web canvas.

Ryan's use of the tool goes beyond just posting information and giving students access to it. She has turned Lino into a collaborative workspace.

"Students use it to post images, upload movies, share ideas, and talk to one another," says Ryan. For a recent homework project, students used Apple's GarageBand software to create a television show on ancient Indian and Chinese civilizations. The show was modeled after the TV quiz show *Cash Cab*, in which unwitting passengers play a trivia game for money.

"We set up the project to mimic those online game shows, with students focusing on questions about ancient civilizations," says Ryan. The footage was shot outside of the school, and students brought the materials into class, where they worked together to assemble complete television shows using GarageBand. The projects were then uploaded to a Lino page, where Ryan was able to collaborate with students by providing feedback and input directly through Lino's sticky notes and conversation tools.

Once finalized, the projects were uploaded to a dedicated PBworks wiki page, which served as a "home base" for the shows. "This is a great way to communicate and for me to see the work they're doing both in and out of school," she says.

Eyes on the Prizes

Iveda's Camina may not give vision-impaired children new sets of eyes, but it does give their teachers a way to see what their students are doing.

Visually impaired children who live in remote rural areas have had very specific challenges. Many school districts depend on a small number of itinerant teachers (or, in many cases, just one) who work with those children. Because the teacher's physical presence was required, students would have to wait for that single teacher to appear before they could complete all of their work.

In the spring of 2009, the Foundation for Blind Children launched a six-month pilot program that aimed to prove that a cloud-based, assistive-technology instruction model could allow teachers of the visually impaired to conduct lessons, adapt materials, consult with classroom teachers, and work with students remotely in real time. The secret to success was a video surveillance services provider called Iveda Solutions

and its product, Camina "camera in a bag"--a mobile, pan-tilt-zoom camera system, with cellular-broadband connectivity and cloud-based video hosting services, that would allow the teacher to monitor the student's activities from a remote location.

The camera solution meant that the teacher and student could communicate--and the teacher could monitor the student's work--without being physically present. The high-quality, portable, cloud-based camera could go anywhere the student went. It also allowed students access to any number of teachers who could provide the best instruction for a specific task (without the teacher being physically present).

"Iveda revolutionized how we teach blind and visually impaired students," says Marc Ashton, CEO of the Foundation for Blind Children.

Hip Kid Lit

San Francisco's Francisco Middle School has a culturally diverse student body and a large limited-English population. So, many teachers rely heavily on individualized learning projects to engage their students.

Elizabeth Fierst, a sixth-grade language arts teacher, has used the district's School Loop website to create a cloud-based project called Novel Podcasts. Students in her class choose one of three novels to read and then participate in virtual literary study groups with peers who have chosen the same novel. In the online study groups, they share personal reading responses and discuss character, setting, and plot.

Fierst is able to keep track of each student's progress throughout the project with the School Loop website's virtual discussion threads and assignment-based discussions. The student's peers, as well as Fierst, can leave their feedback in response to updated progress on the project as quickly as it is completed by each of the students. Then the students are able to virtually keep track of their notes and feedback in their own School Loop digital lockers, which make possible unlimited data storage, document sharing, and remote retrieval of all information.

Once they have finished reading their novels, each study group of students creates and uploads its own podcast, accompanied by a three-paragraph written script, as a virtual book report. After viewing the presentation, classmates are asked to leave final feedback by replying to the post and explaining what they liked about the presentations and what could be improved. The completed project, as well as feedback and grades from Fierst, then can be viewed by parents who are able to see for themselves that students are meeting goals and on track to succeed.

Core Scores

Common Core State Standards are slowly but surely replacing state standards of learning, which may be causing anxiety for educators who must make changes to the way they teach and assess as a result. Fortunately, a recent educational technology startup called MasteryConnect has created a free, cloud-based solution to help teachers collaborate to track their students' mastery of Common Core Standards.

"It's great to be able to build my own personal learning network around the core," says Alisa Belliston, a second-grade teacher at Riverton Elementary School in Riverton, UT. "When teachers I'm following in my school, district, or other states share their common assessments around the core, I can instantly see how other teachers are assessing and tracking mastery."

MasteryConnect has taken aim at the old average-based grading system, and focused on providing a way for teachers to visualize the progress of student mastery of concepts and standards. That information is then made available to parents and administrators in real time and shows exactly how well students are doing.

As with many cloud services and web 2.0 models, MasteryConnect's "freemium" solution has both free and paid features. Teachers can use all the social tools, common assessment sharing, mastery tracking, and parent reporting features for free. The components teachers must pay for include what the company calls "time-saving assessment tools" for the iPod, iPad, web browser and paper-based bubble sheet scanning from a web or document camera.

LINKS

Adobe Connect Pro adobe.com/products/adobeconnect.html

Apple GarageBand apple.com/ilife/garageband

Foundation for Blind Children seeitourway.org

Google Apps google.com/apps

Iveda Solutions ivedasolutions.com

Lino en.linoit.com

MasteryConnect masteryconnect.com

PBworks pbworks.com

School Loop schoolloop.com

StudySync studysync.com

Wixie wixie.com

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